

claim
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~~(a) DNA sequences comprising a nucleotide sequence encoding a protein comprising the amino acid sequence as given in SEQ ID NO:2;~~

~~(b) DNA sequences comprising a nucleotide sequence as given in SEQ ID NO:1;~~

~~(c) DNA sequences hybridizing under stringent hybridization conditions with the complementary strand of a DNA sequence as defined in (a) or (b);~~

~~(d) DNA sequences encoding an amino acid sequence which has at least 70% sequence identity to the amino acid sequence encoded by the DNA sequence of (a) or (b);~~

~~(e) DNA sequences, comprising a nucleotide sequence as defined in any one of (a) to (d) wherein the nucleotide sequence is degenerated as a result of the genetic code ; and~~

~~(f) DNA sequences encoding a fragment of a protein encoded by a DNA sequence of any one of (a) to (e).~~

2. (Amended) A method for identifying and obtaining mitogenic cyclins comprising a two-hybrid screening assay wherein CDC2a as a bait and a cDNA library of a plant cell suspension as prey are used and wherein said mitogenic cyclins identified as interacting with CDC2a are obtained.

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4. (Amended) An isolated DNA sequence encoding a mitogenic cyclin obtainable by the method of claim 2 or 3.

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6. (Amended) A vector comprising the DNA sequence of claim 1.

7. (Amended) The vector of claim 6 which is an expression vector wherein the DNA sequence is operatively linked to one or more control sequences allowing the expression of said DNA sequence in prokaryotic and/or eukaryotic host cells.

8. (Amended) A host cell comprising the vector of claim 6.

10. (Amended) A method for the production of a mitogenic cyclin or an immunologically active or functional fragment thereof having mitogenic cyclin activity comprising culturing a host cell of any of claims 8, 32 or 34 under conditions allowing the expression of the protein and recovering the produced protein from the culture.

27. (Amended) A diagnostic composition comprising a DNA sequence of claim 1, and optionally suitable means for detection of said DNA sequence wherein the means for detection is a probe.

Please add the following claims:

30. A vector comprising the DNA sequence of claim 4.

31. The vector of claim 30 which is an expression vector wherein the DNA sequence is operatively linked to one or more control sequences allowing the expression of said DNA sequence in prokaryotic and/or eukaryotic cells.

32. A host cell comprising a vector of claim 6.

33. A host cell comprising a vector of claim 30.

34. A host cell comprising a DNA sequence of claim 1

35. A host cell comprising a DNA sequence of claim 4.

36. The host cell of any of claims 8, 32 or 34 wherein the host cell is a bacterial, insect, fungal, plant or animal cell.

37. A diagnostic composition comprising a DNA sequence of claim 4 and optionally suitable means for detecting said DNA sequence wherein the means for detecting is a probe.

38. A method for modulating plant cell cycle, plant cell division or growth which comprises modulating the level or activity of a mitogenic cyclin in a plant cell wherein said

mitogenic cyclin comprises the sequence set forth in SEQ ID NO:2 or a sequence having at least 70% sequence identity thereto.

39. A method for modulating plant cell cycle, plant cell division or growth which comprises modulating the level or activity of a mitogenic cyclin in a plant cell wherein said mitogenic cyclin is encoded by:

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consider
- (a) DNA sequences comprising a nucleotide sequence encoding a protein comprising the amino acid sequence as given in SEQ ID NO:2,
 - (b) DNA sequences comprising a nucleotide sequence as given in SEQ ID NO:1,
 - (c) DNA sequences hybridizing under stringent hybridization conditions with the complementary strand of a DNA sequence as defined in (a) or (b);
 - (d) DNA sequences encoding an amino acid sequence which has at least 70% sequence identity to the amino acid sequence encoded by the DNA sequence of (a) or (b);
 - (e) DNA sequences, comprising a nucleotide sequence as defined in any one of (a) to (d) wherein the nucleotide sequence is degenerated as a result of the genetic code ; or
 - (f) DNA sequences encoding a fragment of a protein encoded by a DNA sequence of any one of (a) to (e).

40. The method of claim 39 wherein modulating the level or activity of the mitogenic cyclin is achieved by overexpressing one or more of said DNA sequences in a plant cell.

41. The method of claim 39 wherein modulating the level or activity of the mitogenic cyclin is achieved by reducing expression by one or more said DNA sequences in a plant cell.

REMARKS

In response to the Office Action of March 25, 2002, Applicants have amended the claims, which when considered with the following remarks, is deemed to place the present